

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9607150026 DOC.DATE: 96/07/08 NOTARIZED: NO DOCKET #
FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
AUTH.NAME AUTHOR AFFILIATION
LAVELLE,S. Florida Power & Light Co.
STALL,J.A. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 96-007-00:on 960607,inadvertent start of 1B Emergency Diesel Generator (EDG).Caused by procedural inadequacy. Reset Containment Isolation Actuation Signal,restored 1B3 4160 Volt bus & unloaded & secured EDG.W/960708 ltr.

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Florida Power & Light Company, P.O. Box 128, Fort Pierce, FL 34954-0128

July 8, 1996

L-96-169
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Re: St. Lucie Unit 1
Docket No. 50-335
Reportable Event: 96-007
Date of Event: May 14, 1996
Inadvertent Start of the 1B Emergency Diesel Generator
During "B" Channel Containment Isolation Actuation Signal
Testing due to Procedural Inadequacy.

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'JAS'.

J. A. Stall
Vice President
St. Lucie Plant

JAS/SL

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, USNRC, Region II
Senior Resident Inspector, USNRC, St. Lucie Plant

9607150026 960708
PDR ADOCK 05000335
S PDR

IE224,

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 60.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-8 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

ST LUCIE UNIT 1

DOCKET NUMBER (2)

05000335

PAGE (3)

1 OF 6

TITLE (4)

Inadvertent Start of the 1B Emergency Diesel Generator During "B" Channel Containment Isolation Actuation Signal Testing Due to Procedural Inadequacy.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
6	7	96	96	007	0	7	8	96	NA	NA
									FACILITY NAME	DOCKET NUMBER
									NA	NA
									FACILITY NAME	DOCKET NUMBER
									NA	NA
OPERATING MODE (9)	6		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	0		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
			20.2203(a)(2)(ii)		20.2203(a)(4)		X 50.73(a)(2)(iv)		OTHER	
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 368A	
		20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)				

LICENSEE CONTACT FOR THIS LER (12)

NAME

Sean Lavelle, Licensing

TELEPHONE NUMBER (include Area Code)

(561) 467-7160

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

YES
(if yes, complete EXPECTED SUBMISSION DATE).

X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On June 4, 1996 with Unit 1 in Mode 6, the Electrical Maintenance Department completed the degraded voltage functional test of the 1B2 480 Volt bus, while it was cross tied to the 1A2 480 Volt bus to accommodate auxiliary loads. On June 7, 1996, a licensed utility operator was performing the manual initiation of the Containment Isolation Actuation Signal (CIAS) to verify containment isolation per the requirements of the refueling procedure. Upon initiation of the CIAS on the B channel, the 1B Emergency Diesel Generator (EDG) started and loaded on to the 1B3 4160 bus. The crew entered the off normal procedure (ONP), reset CIAS, and unloaded the EDG from the 1B3 4160 bus. The ONP was exited.

The cause of this event was inadequate fuse configuration control, due to procedural deficiency in the degraded voltage functional test procedure being used.

The "A" side electrical train was the operable equipment in service. The "A" train Shutdown Cooling System was in service and flow was not interrupted or degraded during this event.

Corrective Actions: 1) Operations reset the CIAS, restored the 1B3 4160 Volt bus from the startup transformer and unloaded and secured the EDG. 2) The electrical maintenance procedures were revised to ensure all fuses are installed prior to the degraded voltage functional test. 3) The operations procedure for bus cross tying was revised to allow the running of auxiliary loads. 4) Maintenance procedures will be revised to ensure fuses are returned to their initial configuration. 5) Based on this event and LER 335-96-006 an evaluation of plant evolutions with electrical busses cross tied will be performed. 6) Fuse holder labels will be improved to clarify local identification.



LICENSEE EVENT REPORT (LER)
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION OF THE EVENT

On June 4, 1996, with Unit 1 in Mode 6, electrical maintenance personnel performed a scheduled functional test of the under voltage protection on the 1B2 480 Volt bus. At the conclusion of the functional test, the "AM" fuses to the under voltage sensing relays on the 1B2 4160 Volt bus were left out as required by procedure. At approximately 2323 on June 7, 1996 a licensed utility operator was performing Data Sheet 2 Appendix A of Operating Procedure 1-1600023 "Refueling Sequencing Guidelines". This Data Sheet tests the containment isolation actuation signal (CIAS) (EIS:JM) portion of the "SA" and "SB" train Engineered Safety Features Actuation System (EIS:JE). The system is actuated manually and the operator then verifies that appropriate components perform as designed. The portion of the test which verifies the "SA" channel components, was previously performed satisfactorily. The "SA" and "SB" channels are electrically independent of each other.

The 1B2 480 Volt load center (EIS:EC) was electrically cross-tied to the "A" electrical train (EIS:EC) (see Figure 1) in accordance with OP 1-0910024 "Cross-tying/Removal/Restoration of 480 Volt Busses". This alignment allowed continued operation of "B" side auxiliary components during previous maintenance activities performed on the 1B3 4160 Volt bus (EIS:EA). The 1B3 4160 Volt bus is the normal supply for the 1B2 480 Volt bus. The 1B3 4160 Volt bus was energized from offsite power through the 1B startup transformer (EIS:EA) in preparation for returning the entire "B" train electrical to service.

When the manual containment isolation signal was actuated on the "SB" channel, the 1B Emergency Diesel Generator (EDG) (EIS:EK) started and loaded on the 1B3 4160 Volt bus. The control room crew entered Off Normal Operating Procedure 1-0910054 "Loss of Safety Related AC Bus". Operations realigned the 1B3 4160 Volt bus to the 1B start-up transformer through the 1B2 4160 Volt bus and the 1B EDG was then unloaded and secured. Operations exited the Off Normal Operating Procedure.

The 1B2 480 Volt load center is equipped with under voltage relays that energize on a loss of voltage from the 1B3 4160 Volt bus. The "AM" fuses supply voltage sensing input to the under voltage relays. The removal of these fuses satisfied one of the logic requirements needed for the EDG start. When the CIAS was manually initiated by operations performing the surveillance test, the second criterion was met and the EDG started and loaded.

The required four hour notification pursuant to 10 CFR 50.72 was made to the Nuclear Regulatory Commission along with notification to management.

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CAUSE OF THE EVENT

The cause of this event was inadequate fuse configuration control during degraded voltage functional testing, due to a procedural deficiency. Maintenance Procedure MP 1-0970028 "Channel Calibration and Functional Test of the B Safety Buses Loss of Voltage/Degraded Voltage Network", which was performed prior to the performance of the CIAS surveillance test, contained no instructions to reinstall fuses which were removed as part of degraded voltage testing. The only action required was to notify the shift supervisor that the fuses have been removed. The shift supervisor was notified and an out of service log entry was already made for the 1B2 480 Volt bus therefore, no actions were taken.

With the "AM" fuses removed the relays for the under voltage actuation had been energized to close their respective contacts. With the under voltage relays closed and a concurrent CIAS actuation the load shedding relays closed. The 1B2 480 Volt bus and the 1B3 4160 Volt bus were unloaded. The 1B EDG started and reloaded the applicable safety related equipment as designed.

The event response team which investigated this event also found that, the labeling of the fuse holders in the cabinet was less than adequate due in part to the proximity of each set of fuses and the nomenclature of each set ("AM", "AN"). The insufficient labeling could potentially contribute to the wrong set of fuses being removed at a future date. The investigative team recommended clarification of the labels.

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ANALYSIS OF THE EVENT

This event is reportable under 10 CFR 50.72 (b) (2) (ii) and 10 CFR 50.73 (a) (2) (iv) as "Any event or condition that resulted in a manual or automatic actuation of any engineered safety feature...".

The actuation of the 1B EDG and the concurrent loading of the safety related equipment occurred as designed. The direct cause of the 1B EDG starting was the under voltage condition on the 1B2 480 Volt bus due to the "AM" fuses having been removed. Procedural deficiencies were found to be the underlying initiator of the event.

This event is applicable to Unit 1 only since Unit 2 has a different protection scheme and the maintenance procedures used during this event do not exist for Unit 2.

This event did not adversely affect plant operations since the unit was in Mode 6 and the A side independent electrical train was in operation pursuant to Technical Specification 3.8.1.2. Actuation of the B side CIAS and the EDG starting did not interrupt or change the required flow rates of the operable "A" train shutdown cooling system. The fuses would have been discovered missing upon restoration of the "B" train electrical when operations verifies all associated alarms, and bus flags are reset. With the "AM" fuses out, the bus was left in a more conservative configuration since the portion of the logic for EDG start was actuated. Therefore, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

1. Operations reset the B channel CIAS and reenergized the 1B3 4160 bus from the startup transformer. The 1B EDG was unloaded and secured in accordance with procedure.
2. Changes were made to MP 1-0970027 and 1-0970028 "Channel Calibration and Functional Test of the Safety Busses Loss of Voltage/Degraded Voltage Network" to ensure fuse configuration control and maintain the protective functions on the electrical busses involved.
3. A procedural revision was made to OP 1-0910024 "Cross-tying/Removal/Restoration of 480 Volt Busses" to improve the methodology for enabling auxiliary loads on the cross tied bus.



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CORRECTIVE ACTIONS (continued)

4. Electrical and Instrumentation Control Maintenance procedures, which require manipulation of fuses, will be reviewed to ensure the fuses are returned to their initial configuration.
5. Based on this event and LER-335-96-006 an evaluation of the controls necessary to perform plant evolutions with electrical busses cross tied, will be performed. This evaluation will give direction for appropriate tagging to control all equipment involved.
6. Labels for the "AM" and "AN" fuse holders are being made to clarify local identification.

ADDITIONAL INFORMATION

Component Failure

None

Previous Similar Event

LER 335-96-006 "Inadvertent Loss of Containment Audible Count Rate Indication due to Procedural Deficiency"

This event involved the removal of the 1B2 motor control center which deenergized the audible count rate. The procedure did not clearly identify the audible count rate breaker.

LER 389-94-010 "Inadvertent B Train Engineered Safeguards Features Actuation Signal Due to a Deficient Instrument and Control Test Procedure".

This event occurred due to the bistable not being physically removed far enough to prevent inadvertent contact. Procedural guidance was given to ensure this event was not repeatable



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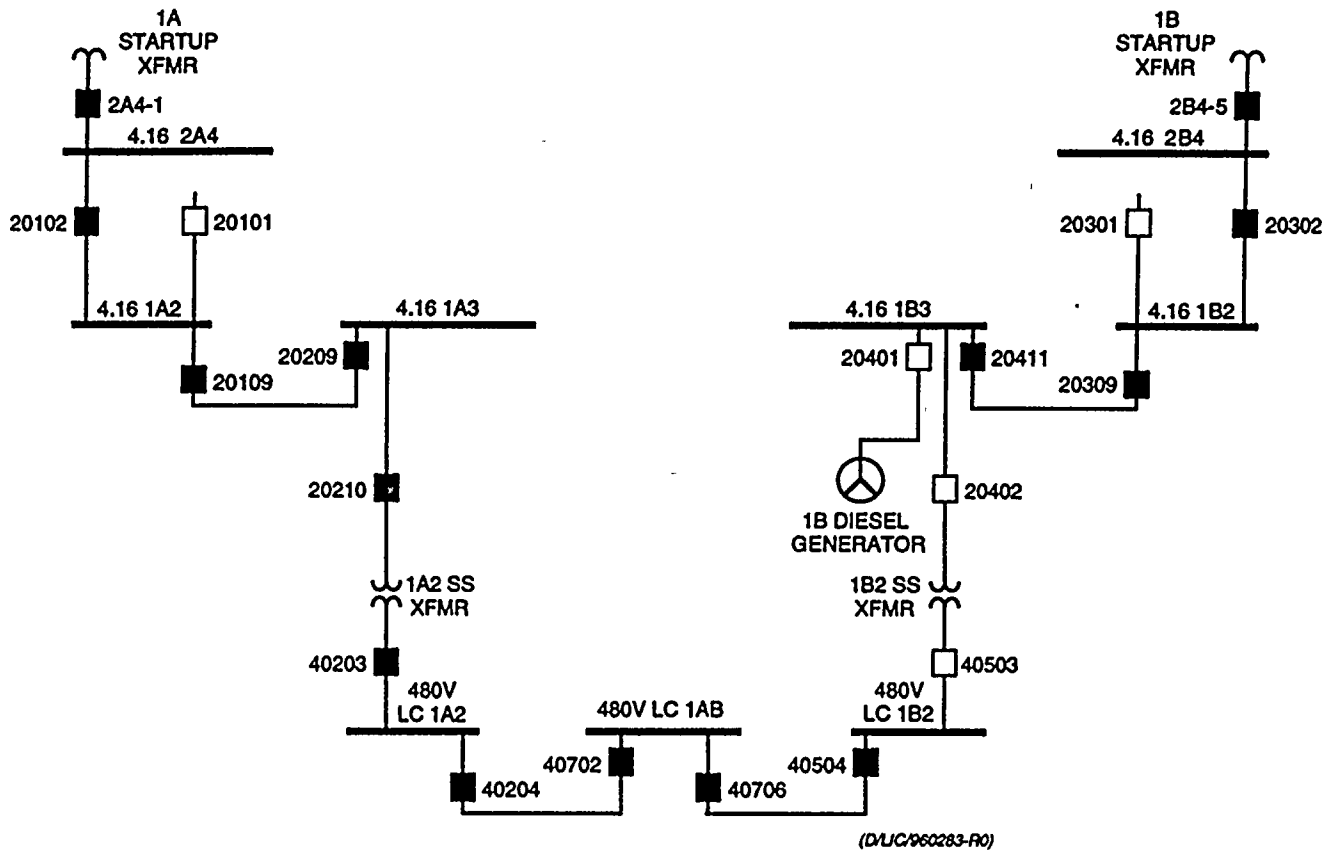


Figure 1